

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Claims 1-37 (Cancelled).

38. (Currently Amended) An architecture Architecture for monitoring quality of service in a telecommunication network comprising:

a set of terminals, each terminal of said set of terminals housing at least one measuring agent ~~[[agents]]~~ which ~~can be~~ configured to interface with processes selected from a group of ~~among~~ processes for managing the application sessions of said telecommunication network and processes for measuring the operating conditions of ~~[[the]]~~ said telecommunication network-itself; and

a management and configuration subsystem comprising a scheduling module for scheduling quality of service measuring campaigns, ~~capable of~~ said scheduling module involving identifying a subset ~~respective sub-sets~~ of said set of terminals according to a set of identifying characteristics of the a defined measuring campaign, ~~said scheduling module being able to configure, for the purposes of the execution of~~ and configuring, for executing said defined measuring campaign campaigns, ~~the measuring agents~~ at least one measuring agent housed by ~~[[the]]~~ each terminal of said subset ~~terminals included in said related sub-sets~~ according to said set of identifying characteristics.

39. (Currently Amended) The architecture as claimed in claim 38, wherein an additional subsystem is provided for managing ~~the~~ a collection of measurement data resulting from said defined measurement campaign, said additional subsystem

comprising at least one of a database for storing said collection of measurement data and of a processing centre for processing said collection of measurement data.

40. (Currently Amended) The architecture as claimed in claim 38, wherein said at least one measuring agent ~~[[agents]]~~ housed by ~~[[the]]~~ each terminal of said set of terminals of said set are is configured to dialogue with at least one homologous measurement and management agent ~~agents~~.

41. (Currently Amended) The architecture as claimed in claim 38, wherein ~~at least some of the~~ said set of terminals ~~of said set are~~ comprises at least one mobile terminal ~~terminals~~.

42. (Currently Amended) The architecture as claimed in claim ~~[[38]]~~ 39, wherein said at least one measuring ~~[[agents]]~~ agent housed by each terminal of said subset is ~~[[are]]~~ configured to perform operations selected from the group of:

conducting co-ordinated measurements on said telecommunication network,
performing local storage and pre-processing operations according to ~~[[the]]~~ a set of processing conditions of said telecommunication network, and
managing ~~[[the]]~~ a transfer of the collection of measurement data ~~results-resulting from said defined measurement campaign~~ to said ~~at least an~~ additional subsystem for ~~managing the collection of the measurement data~~.

43. (Currently Amended) The architecture as claimed in claim 38, wherein said at least one measuring agent housed by each terminal of said subset is ~~agents are~~ configured to conduct measurements selected from the group of:

measuring ~~the~~ quality and operating conditions of the a set of radio access
parameters referred to of said subset ~~said~~ terminals,
monitoring end-to-end transport performance in real traffic,
monitoring end-to-end transport performance in artificial traffic,
measuring ~~measurements~~ and processing ~~on~~ said subset terminals to produce
quality of service indicators at the an application layer, and
monitoring the operating conditions of the a set of resources of said subset
~~terminals~~ and of said telecommunication network.

44. (Currently Amended) The architecture as claimed in claim 38, wherein
said at least one measuring agent housed by each of said subset ~~is measuring agents-~~
~~are~~ configured to measure ~~[[the]]~~ a load state of at least one terminal of said subset ~~the-~~
~~terminal~~ and/or of the telecommunication network and to adapt ~~[[the]]~~ a monitoring of
quality of service in said telecommunication network to the measured load state-
~~measured~~.

45. (Currently Amended) The architecture as claimed in claim 38, wherein
said management and configuration subsystem comprises at least one ~~a~~-respective
communication agent ~~capable of~~ that interfaces ~~interfacing~~ with ~~respective~~ at least one
communication agent ~~agents~~ associated with said at least one measuring agent
~~[[agents]]~~ housed by ~~[[the]]~~ each terminal of said set of ~~terminals of said set~~.

46. (Currently Amended) The architecture as claimed in claim 39, wherein
said management and configuration subsystem comprises at least one ~~respective~~

communication agent ~~capable of~~ that interfaces ~~interfacing~~ with at least one homologous communication agent associated with ~~comprised in~~ said additional subsystem ~~for managing the collection of the measurement data~~.

47. (Currently Amended) The architecture as claimed in claim 38, wherein said management and configuration subsystem ~~comprise~~ comprises an interface for interfacing with a user.

48. (Currently Amended) The architecture as claimed in claim 39, wherein said additional subsystem ~~for managing the collection of the measurement data~~ comprises a ~~respective~~ communication agent configured to communicate with at least one ~~respective~~ communication agent ~~agents~~ associated with said at least one measuring agent ~~[[agents]]~~ housed by ~~[[the]]~~ each terminal of said set of ~~terminals of~~ said set.

49. (Currently Amended) The architecture as claimed in claim 39, wherein said additional subsystem ~~for managing the collection of the measurement data~~ comprises a ~~respective~~ an interface for interfacing said architecture with at least one external system ~~systems~~.

50. (Currently Amended) The architecture as claimed in claim 39, wherein said at least one measuring agent ~~[[agents]]~~ housed by each terminal of ~~[[the]]~~ said ~~subset is~~ ~~terminals of said set~~ are configured for the direct to transfer ~~[[of]]~~ said collection of measurement data to said additional subsystem ~~sub-system for managing~~ ~~the collection of the measurement data~~.

51. (Currently Amended) The architecture as claimed in claim 38, wherein said at least one measuring agent housed by each terminal of said set of terminals operates ~~agents operate~~ according to Jade technology.

52. (Currently Amended) The architecture as claimed in claim 40, wherein said at least one measuring agent housed by each terminal of said subset ~~[[agents]]~~ dialogue with said at least one homologous measurement and management agent ~~agents~~ with a communication resource selected from the group of:

information transport by means of SMS,
TCP/IP transport, and
UDP/IP transport.

53. (Currently Amended) The architecture as claimed in claim 38, wherein said scheduling module is configured to perform at least one operation selected from the group of:

defining the set of identifying characteristics of ~~[[a]]~~ the defined measurement campaign,

identifying the subset of said set of terminals to be subjected to said campaign,

defining ~~[[the]]~~ a set of measurements to be made and ~~[[the]]~~ a set of quality of service indicators to be obtained,

defining ~~[[the]]~~ a set of characteristics of the set measurements to be made, and

defining ~~[[the]]~~ a set of contextual information associated with the set of measurements to be made and carried out by said at least one measuring agent ~~[[agents]]~~ housed by each terminal of said subset.

54. (Currently Amended) The architecture as claimed in claim 38, wherein, in order to identify said ~~respective sub-sets~~ subset of said set of terminals, said scheduling module is configured to carry out operations selected from the group of:

~~continuous search~~ continuously searching for the subset of said set of terminals meeting the set of identifying characteristics of the defined measurement measuring campaign,

recording said subset of said set of terminals on an internal database,

creating a measurement profile with ~~[[the]]~~ information for conducting a set of ~~[[said]]~~ measurements by ~~a respective~~ the at least one measuring agent housed by each terminal of said subset of said set of terminals,

activating the defined campaign on each terminal of the involved said subset of said set of terminals,

sending the set of measurements ~~measurement information~~ collected from each terminal of said subset of said set of terminals,

identifying at least one terminal that no longer meets the set of indentifying characteristics of the defined measuring campaign ~~the terminals subjected to changes~~ of the relevant characteristics for the purposes of the measurement,

deactivating the defined measuring campaign, and

deleting the measurement profiles ~~profiles~~ from said each terminal of said subset of said set of terminals ~~and related information for the purpose of a determined~~ measurement campaign.

55. (Currently Amended) A method for monitoring quality of service in a telecommunication network comprising a set of terminals comprising ~~the steps of~~:

associating ~~to the terminals of~~ each terminal of said set ~~of terminals with~~[[.]]
~~measuring agents~~ at least one measuring agent ~~which can be configured to interface~~
with processes selected ~~among~~ from a group of processes for managing the application
sessions of said telecommunication network and processes for measuring the operating
conditions of [[the]] said telecommunication network itself, and

conducting quality of service measuring campaigns, ~~capable of~~ each quality of
service measuring campaign ~~involving respective sub-sets~~ a subset of said set of
terminals according to a set of identifying characteristics of the a defined measuring
campaign and configuring, ~~for the purposes of the execution of~~ executing said defined
measuring ~~campaigns~~ campaign, at least one [[the]] measuring agents agent associated
with ~~the terminals included in said respective sub-sets~~ each terminal of said subset
according to said set of identifying characteristics.

56. (Currently Amended) The method as claimed in claim 55, comprising ~~the~~
~~step of~~ managing [[the]] a collection of measurement data and providing at least one of
a database for storing said collection of measurement data and a processing centre for
processing said collection of measurement data.

57. (Currently Amended) The method as claimed in claim 55, comprising ~~the~~
~~step of~~ configuring said at least one measuring agent ~~measuring agents~~ associated with
~~the terminals~~ each terminal of said set of terminals to dialogue with at least one
homologous measurement and management agents agent.

58. (Currently Amended) The method as claimed in claim 55, comprising ~~the~~

~~step of selecting at least some of the terminals of said set as mobile terminals wherein~~
at least one terminal of said set of terminals comprises a mobile terminal.

59. (Currently Amended) The method as claimed in claim 55, comprising ~~the~~
~~step of configuring said~~ at least one measuring agent associated with each terminal of
said subset agents to perform steps selected from the group of:

conducting co-ordinated measurements on said telecommunication network,
performing local storage and pre-processing operations according to ~~[[the]]~~ a set
of processing conditions of said telecommunication network, and
managing ~~[[the]]~~ a transfer of [[the]] a collection of measurement data resulting
from conducting the defined measuring campaign results to said ~~at least~~ an additional
sub-system for managing the collection of the measurement data.

60. (Currently Amended) The method as claimed in claim 55, comprising ~~the~~
~~step of configuring said~~ at least one measuring agent agents associated with each
terminal of said subset to conduct measurements selected from the group of:

measuring ~~[[the]]~~ quality and operating conditions of ~~[[the]]~~ a set of radio access
parameters referred to of said subset terminals,

monitoring end-to-end transport performance in real traffic,
monitoring end-to-end transport performance in artificial traffic,
measuring and processing on said subset terminals for the production of quality
of service indicators at ~~[[the]]~~ an application layer, and

monitoring ~~[[the]]~~ operating conditions of ~~[[the]]~~ a set of resources of said subset
terminals and of said telecommunication network.

61. (Currently Amended) The method as claimed in claim 55, comprising ~~the steps of:~~

measuring, by means of said at least one measuring agents agent associated with each terminal of said subset, ~~[[the]]~~ a load state of ~~[[the]]~~ at least one terminal of said subset and/or of ~~[[the]]~~ said telecommunication network, and

adapting ~~[[the]]~~ a monitoring of quality of service in said telecommunication network to the measured load state.

62. (Currently Amended) The method as claimed in claim 55, comprising ~~the step of~~ providing a sub-system for the management and configuration of the quality of service measurement campaigns ~~capable of interfacing that interfaces~~ with said at least one measuring agents ~~housed by agent associated with each the terminals~~ terminal of said set of terminals.

63. (Currently Amended) The method as claimed in claim 56, comprising ~~the steps of:~~

providing a sub-system for the management and configuration of the quality of service measurement campaigns, and

providing an additional sub-system for managing the collection of ~~[[the]]~~ measurement data ~~capable of interfacing that interfaces~~ with said sub-system for the management and configuration of the quality of service measurement campaigns.

64. (Currently Amended) The method as claimed in claim 55, comprising ~~the step of~~ providing a sub-system for the management and configuration of the quality of

service measurement campaigns ~~capable of interfacing~~ that interfaces with a user.

65. (Currently Amended) The method as claimed in claim 56, comprising ~~the~~
~~step of~~ providing an additional sub-system for managing the collection of ~~[[the]]~~
measurement data configured to communicate with said at least one measuring agents
agent associated with ~~the terminals~~ each terminal of said set of terminals.

66. (Currently Amended) The method as claimed in claim 56, comprising ~~the~~
~~step of~~ providing an additional sub-system for managing the collection of ~~[[the]]~~
measurement data configured ~~for interfacing~~ to interface with at least one external
~~systems~~ system.

67. (Currently Amended) The method as claimed in claim 56, comprising ~~the~~
~~steps of~~:

providing an additional sub-system for managing the collection of ~~[[the]]~~
measurement data, and

configuring said at least one measuring agents agent associated with ~~the~~
~~terminals~~ each terminal of said ~~subset~~ set ~~for the direct~~ to transfer ~~[[of]]~~ said collection of
measurement data to said additional sub-system ~~for managing the collection of the~~
measurement data.

68. (Currently Amended) The method as claimed in claim 55, wherein said at
least one measuring agents agent associated with each terminal of said set of terminals
~~operate~~ operates according to Jade technology.

69. (Currently Amended) The method as claimed in claim 57, comprising ~~the~~
~~step of configuring said at least one measuring agents agent associated with each~~
~~terminal of said set of terminals~~ for dialoguing with said homologous agents
~~measurement and management agent~~ with a communication resource selected from the
group of

information transport by means of SMS,

TCP/IP transport, and

UDP/IP transport.

70. (Currently Amended) The method as claimed in claim 55, wherein ~~the~~
~~step of conducting said quality of service~~ measurement campaigns in turn comprises at
least a step selected from the group of:

defining the set of identifying characteristics of [[a]] the defined measuring
~~measurement~~ campaign,

identifying the subset of said set of terminals to be subjected to said defined
measuring campaign,

defining ~~[[the]]~~ a set of measurements to be made and ~~[[the]]~~ a set of quality of
service indicators to be obtained,

defining ~~[[the]]~~ a set of characteristics of ~~[[the]]~~ said set of measurements to be
made, and

defining ~~[[the]]~~ a set of contextual information associated with ~~[[the]]~~ said set of
measurements to be made and carried out by said at least one measuring agents agent
associated with each terminal of said subset.

71. (Currently Amended) The method as claimed in claim 55, further comprising, wherein, in order to identify said ~~respective sub-sets~~ subset of said set of terminals, ~~comprising~~ the steps selected from the group of:

- continuously searching for the subset of said set of terminals meeting the set of identifying characteristics of the defined measuring measurement campaign,
- recording said subset of said set of terminals on an internal database,
- creating a measurement profile with ~~[[the]]~~ information for conducting a set of ~~[[said]]~~ measurements by a ~~respective~~ the at least one measuring agent associated with each terminal of said subset,
- activating the defined measuring campaign on each terminal of said subset ~~the~~ ~~involved terminals~~,
- sending the set of measurements ~~measurement information~~ collected from each terminal of said subset of said set of terminals,
- identifying at least one terminal that no longer meets the set of identifying characteristics of the defined measuring campaign ~~the terminals subjected to changes~~ ~~of the relevant characteristics for the purposes of the measurement~~,
- deactivating the defined measuring campaign, and
- deleting the measurement profile ~~profiles~~ from each terminal of said subset of said set of terminals ~~and related information for the purpose of a determined~~ ~~measurement campaign~~.

72. (Currently Amended) A telecommunication network comprising, ~~monitoring~~ the architecture as claimed in claim 38, and associated with the telecommunication ~~network itself~~.

73. (Currently Amended) The telecommunication network as claimed in claim 72, comprising at least an application server housing at least one ~~[[a]]~~ measuring agent ~~capable of interacting that interacts~~ with said ~~monitoring~~ architecture.

74. (Currently Amended) A computer-readable medium storing a computer program product for execution on a processor, ~~program product capable of being loaded into the memory of at least one electronic computer and~~ the computer program product comprising portions of software code for implementing ~~the architecture as claimed in any one of claims 38-54 or the method as claimed in any one of claims 55-~~ 71.

Please add the following new claims 75 and 76:

75. (New) The architecture as claimed in claim 38, wherein the measuring agents housed within the set of terminals comprise:

a measuring agent configured to interface with a process for managing an application session of said telecommunication network and to derive therefrom a set of measurement data;

an elaboration agent configured to pre-process said set of measurement data derived from said application session; and

a communication agent configured to send said set of pre-processed measurement data to said management and configuration subsystem.

76. (New) The method as claimed in claim 55, wherein the measuring agents comprise:

a measuring agent configured to interface with a process for managing an

application session of said telecommunication network and to derive therefrom a set of measurement data;

an elaboration agent configured to pre-process said set of measurement data derived from said application session; and

a communication agent configured to send said set of pre-processed measurement data to said management and configuration subsystem.